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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,663	06/21/2001	Shantha Sarangapani	103.215.118	4750

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EXAMINER

PAK, JOHN D

ART UNIT PAPER NUMBER

1616

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,663

Applicant(s)

SARANGAPANI ET AL.

Examiner

JOHN PAK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,4,7,8,11,12 and 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,6,9,10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

This Office action is in reply to applicant's response of 5/11/2005.

Claims 1-2 and 4-20 are pending in this application. Claims 1-2, 4, 7-8, 11-12 and 15-20 stand withdrawn from further consideration as being directed to non-elected subject matter. Claims 5, 6, 9, 10, 13 and 14 will presently be examined *to the extent that they read on the elected subject matter*, i.e. laminating layer, chemical deactivating composition and antimicrobial are free from activated carbon (corrected from the original "carbon free"). Applicant is requested to amend the independent claims to correspond to the elected subject matter.

Applicant is advised that functional language for the effective amounts of chemical deactivating composition and antimicrobial composition would improve the claim. Presently, the amounts for the compositions are undefined.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-6, 9-10 and 13-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claim 5 has been amended to recite 0-23 wt% plasticizer in the chemical deactivating composition. However, the minimum wt% total of the other components is 85 wt%, which makes 23 wt% impossible. Independent claim 5 has also been amended to recite 15-95 wt% carrier in the antimicrobial composition. However,

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the minimum wt% total of the other components is 8 wt%, which makes 95 wt% impossible. Independent claims 9 (plasticizer wt%) and 13 (carrier wt%) are defective for the same reasons. Dependent claims are included herein because they do not rectify the defects found in the independent claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foss et al. (US 6,723,428).

Foss et al. disclose a laminate material (column 2, lines 12-13; column 19, lines 24-25; see from column 39, line 55 to column 42, line 62; column 50, lines 23-26; column 56, lines 3-43; Figure 16). Deposited on the laminate material is "small particles of anti-microbial agent" (column 39, line 60). The antimicrobial agent is at the surface so that it comes into contact with microbes and fungi (sentence bridging columns 39 and 40; see also the variations in the laminates, columns 40-42). Foss' antimicrobial agents are 1-3 micron in size (column 12, lines 25-28; column 17, lines 59-64) and

include zeolite of silver and copper (column 12, lines 58-62; column 17, lines 41-45; column 42, lines 27-34).

The difference between the invention of claims 9-10 and Foss et al. is that Foss et al. do not explicitly disclose a chemical deactivating composition comprising 5-25 wt% chemical deactivation formulation + 0-23 wt% plasticizer + 75-95 wt% carrier, wherein the chemical deactivating formulation contains 5-25 wt% nanosize metallic particles of silver or silver-copper alloys and 15-60 wt% of another metal (inclusive of silver) compound. The claims do not specify how much of the chemical deactivating composition is deposited on the laminating layer, so there is no difference there.

Carrier

While a carrier for Foss' antimicrobial agent is not specified, given the multiple-component processing required to obtain Foss' laminates, the various binders, plasticizers and other excipients required to formulate the laminate would function as carriers for Foss' 1-3 micron sized silver and other metals. As for the specifics of the 5-25 wt% chemical deactivating formulation + 75-95 wt% carrier + optional plasticizer, such percentage proportions are held to be within the skill of the ordinary skilled artisan, who would have been motivated to arrive at such proportions to deliver antimicrobial silver for antimicrobial purposes while concomitantly processing the laminate.

Proportion: 5-25 wt% Ag metallic particles + 15-60 wt% Ag or Cu compound

It is the Examiner's interpretation that Foss' silver (alone) or silver and copper particles meet this claim feature. The wt% attributable to the zeolite carrier would have been adjusted by the ordinary skilled artisan to ensure antimicrobial property to the laminate.

Nanosize metallic particles

The term "nanosize" can have a broad meaning, because it does not specify how many nanometers to which the size is limited. In the absence of a specific nanometer range, Foss' 1-3 micron range (1000-3000 nm) is deemed to be sufficient to meet the "nanosize" feature.

Barrier feature

The claim language, "A chemical protective and chemical agent deactivating material comprising: a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer" is noted, but Foss' laminating layer encompasses a wide variety of laminates, including those for footwear. The laminate is a per se "physical barrier" and Foss' laminates includes those that permit moisture to pass through since the various articles such as footwear require such functionality.

Chemical deactivation feature

Although chemical deactivation with silver is not expressly disclosed by Foss et al., it must be noted that the same exact silver is being used on the same laminate. Since Foss's silver in the laminate is at the surface, any chemical that it contacts must necessarily be deactivated in the same manner as applicant's silver in applicant's laminate.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Gary Kunz, can be reached on **(571)272-0887**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'John Pak', is positioned above the printed name.

JOHN PAK
PRIMARY EXAMINER
GROUP 1000